FPRS Subject Index . . . Vol. 29, 1979

All the articles in the 1979 *Journal* are listed both by subject and by author. The Subject Index is organized according to the FPRS Division and Technical Committee structure.

The Author Index lists senior author entries which give complete information for the article, and co-author entries which refer back to the senior author.

Reprints of almost all the articles are available at $2 each. Bulk rates are also available. When ordering please give reprint numbers. A check or money order must accompany each order.

PRODUCTS DIVISION

Bark & Residues

Bark as a Supplement to Wood Furnish for Particleboard, K.D. Wisherd and J. B. Wilson, 2:35 (No. 5824).

Construction Plywood

Development of Performance Specifications for Structural Panels in Residential Markets, M. R. O'Halloran, 12:21 (No. 5955).

Effect of Moisture on Flexural Properties of Clear Southern Pine Plywood, W-C. Lee and E. J. Biblis, 11:43 (No. 5989).

Predicting Rolling Shear Modulus of Plywood, W-C. Lee and E. J. Biblis, 4:31 (No. 5908).

Predicting Veneer Grade Yields for Loblolly and Slash Pine Trees, D. R. Phillips, J. G. Schroeder, and A. Clark III, 12:41 (No. 5992).

Decorative Veneers & Plywood

High-Value Paneling From Dead Western White Pine, K. A. Christophersen and J. P. Howe, 6:40 (No. 5933).

Furniture, Millwork, & Allied Products

Economic Feasibility of Red Oak Press-Lam for Upholstered Furniture Framestock, W. L. Hoover, C. A. Eckelman, R. W. Jokerst, and J. A. Youngquist, 11:21 (No. 5986).

Out-of-Plane Strength and Stiffness of Dowel Joints, C. A. Eckelman, 8:32 (No. 5959).

Utilization of Red Oak Press-Lam as Upholstered Furniture Frame Stock, C. A. Eckelman, W. L. Hoover, R. W. Jokerst, and J. A. Youngquist, 5:30 (No. 5929).

Withdrawal Strength of Dowel Joints: Effect of Shear Strength, C. A. Eckelman, 1:48 (No. 5863).

Hardboard & Insulation Board

Econometric Model of the Domestic Insulation Board Industry, A. T. Schuler, 8:21 (No. 5936).

Hardboards From Mixed Tropical Hardwoods, G. C. Myers, 5:44 (No. 5924).

Hardwood Lumber

Hardwood Sawing Process for Increasing Recovery and Improving Production, H. W. Saunders, 2:21 (No. 5872).

Modulus of Rupture and Dynamic and Static Modulus of Elasticity of Eastern Cottonwood Two-by-Fours, J. W. Funck, D. R. Prestemon, and D. W. Bensend, 11:35 (TN-377).

Sawing High-Quality Red Oak Logs, D. B. Richards and J. A. Newman, 9:36 (No. 5962).

Laminated Wood, Components, & Engineered Structures

Evaluation of Glued Laminated Beams of Eastern Spruce and Eastern Hemlock, C. E. Shuler, D. A. Grant, and R. C. Moody, 7:23 (No. 5947).

Lateral Tests of Wood Roof Sections Sheathed With Lodgepole Pine Decking, J. W. Johnson, 1:41 (TN-368).

Press-Time Reduction by Preheating and Strength Improvement by Finger-Jointing Laminated Veneer Lumber, R. C. Casilla and S-z. Chow, 11:30 (No. 6004).

Production and Marketing Feasibility of Parallel-Laminated Veneer Products, J. A. Youngquist and B. S. Bryant, 8:45 (No. 5970).

Racking Resistance of Wall Components Constructed With Particleboard Decking, D. E. Lyon and H. M. Barnes, 1:43 (No. 5854).

Status of COM-PLY Floor Joist Research, G. A. Koenigshof, 11:37 (No. 5975).

Structural Repair of Heavy Timber With Epoxy, R. R. Avent, P. H. Sanders, and L. Z. Emkin, 3:15 (No. 5905).

Tests of Fire-Retardant Treated and Untreated Lumber-Plywood Nailed and Stapled Joints, J. W. Johnson, 4:23 (No. 5909).

Predrilling Pallet Deckboards Of Very Dense Hardwoods, E. G. Stern and N. Franco, 12:48 (TN-390).

Particleboard & Molded Products

Aspen Particleboards Bonded With Spent Sulfite Liquor Powder Treated With Sulfuric Acid, K. C. Shen and D. P. C. Fung, 3:34 (No. 5889).

Bark as a Supplement to Wood Furnish for Particleboard, K. D. Wisherd and J. B. Wilson, 2:35 (No. 5824).

Deflection in Bending of Birch-Veneered Wood-Base Composite Shelving Panels, P. Chow, 12:39 (TN-392).

Finnish Plywood, Particleboard, and Fiberboard Made With a Lignin-Base Adhesive, K. Forss, 7:39 (No. 5840).

Flakeboard Properties as Affected by Flake Cutting Techniques, E. W. Price and W. F. Lehmann, 3:29 (No. 5897).

Formaldehyde Emission From Particleboard — a New Method for Determination, A. Berge and B. Mellegaard, 1:21 (No. 5862).

Humidity Cycling Effects on Pine Veneer-Particleboard Core Structure Panels, E. J. Biblis and W-C. Lee, 1:52 (No. 5884).

Linear Dimensional Stability of Aspen Veneered Particleboard, K. A. Niazi and R. O. Gertjejansen, 5:28 (TN-387).

Linear Expansion of Particleboard Decking Under Site-Built Exposure Conditions, J. B. Kasper and M. N. Carroll, 5:49 (No. 5881).

Preventing Termite Attack by Adding Insecticide to Particleboard, Hardboard, and Plywood Adhesive, R. H. Beal, 12:29 (No. 5958).

Racking Resistance of Wall Components Contructed With Particleboard Decking, D. E. Lyon and H. M. Barnes, 1:43 (No. 5854).

Red Oak Structural Particleboard, M. O. Hunt, W. L. Hoover, D. A. Fergus, W. F. Lehmann, and J. D. McNatt, 9:43 (No. 5971).

Reel Wheels: an Application of Material Science, R. L. Geimer, 4:44 (No. 5891).

Weatherability of Phenolic-Bonded Ghanaian Hardwood Flakeboard Made From ACA-Treated Flakes, H. J. Hall and R. O. Gertjejansen, 12:34 (No. 6008).

Pulp & Paper

Activities of the Chemistry and Pulp and Paper Technical Committees of FPRS, 10:67 (No. 6055).

Residential & Commercial Buildings

Human Response to Vibration of Floor in Occupied Dwellings, G. H. Atherton and S. E. Corder, 7:29 (No. 5934).

Plen-Wood — an Improved Wood Floor System, D. Countryman, 6:29 (No. 5930).

Yellow-poplar Framing Lumber: Producer, Distributor, User, and Specifier Opinions, B. A. Schick and A. Grinell 1:16 (No. 5859).

Softwood Lumber

Cost of Grading Lumber by the Machine-Stress-Rating Process, 10:80 (No. 6047).

Determining Lumber Target Sizes and Monitoring Sawing Accuracy, T. D. Brown, 4:48 (No. 5777).

Lumber Quality of Beetle-Killed Southern Pine in Virginia, S. A. Sinclair and G. Ifju, 4:18 (No. 5922).

State-of-the-Art — Lumber Manufacture, 10:45 (No. 5931).

Treated Wood Products

CCA and Sodium Pentachlorophenate Inhibition of Basidiospore Germination of Decay Fungi: Contact Agar Method, E. L. Schmidt and D. W. French, 5:53 (No. 5966).

Comparing Ammoniation and Water-Repellent Preservative Treatments for Protecting Wood Window Units From Decay, T. L. Amburgey and B. R. Johnson, 3:23 (No. 5911).

Control of Fungal Sap Stain With Alkaline Solutions of Quarternary Ammonium Compounds and With Tertiary Amine Salts, M. A. Hulme and J. F. Thomas, 11:26 (No. 5982).

In Large Timbers Fumigants Stop Rot That Good Design Could Have Prevented, R. D. Graham, 0:21 (No. 5963).

Laboratory Screening Tests of Fungicides of Low Toxic Hazard for Preventing Fungal Stain of Lumber, H. H. Unligil, 4:55 (TN-384).

Preventing Termite Attack by Adding Insecticide to Particleboard, Hardboard, and Plywood Adhesive, R. H. Beal, 12:29 (No. 5958).

Resistance of Wood From Paraquat-Treated Southern Pines to Subterranean Termites, Decay Fungi, and Marine Borers, R. H. Beal, T. L. Amburgey, J. D. Bultman, and D. R. Roberts, 4:35 (No. 5888).

Weatherability of Phenolic-Bonded Ghanaian Hardwood Flakeboard Made From ACA-Treated Flakes, H. J. Hall and R. O. Gertjejansen, 12:34 (No. 6008).

Tests of Fire-Retardant Treated and Untreated Lumber-Plywood Nailed and Stapled Joints, J. W. Johnson, 4:23 (No. 5909).

Tropical Woods

Hardboards From Mixed Tropical Hardwoods, G. C. Myers, 5:44 (No. 5924).

Increased Utilization of Tropical Hardwoods Through Species-Independent Structural Grading, J. F. Senft and R. M. Della Lucia, 6:22 (No. 5669).

Integrated Utilization of Mixed Tropical Hardwoods: Example From the Philippines 9:15 (No. 5914).

PROCESSES DIVISION

Drying & Storage

Deterioration of Logs in Cold Decks: a Survey of Information Applying to the Pacific Northwest, 1:34 (No. 5864).

State-of-the-Art Report, Developments in Applied Drying Technology, 1971-1977, D. G. Arganbright, 12:14 (No. 5595).

Effect of High-Temperature Drying on Tensile Strength of Douglas-fir 2 by 4's, C. C. Gerhards, 3:39 (No. 5900).

Effect of High-Temperature Drying on the Strength of Southern Pine Dimension Lumber, J. Yao and F. Taylor, 8:49 (No. 5878).

Effect of Kerfing on Checking of Untreated Douglas-fir Pole Sections, J. N. R. Ruddick and N. A. Ross, 9:27 (No. 5979).

Effect of Prefreezing on Press-Drying of Black Walnut Heartwood, P.Y.S. Chen and F. E. Biltonen, 2:48 (No. 5894).

High-Temperature Drying of Douglas-fir Dimension Lumber, H. Sumi and J. M. McMillen, 1:25 (No. 5876).

Ongoing Research — Solar Heated Water Dries Lumber, R. L. Little, 2:52 (TN-386).

Shrinkage of Douglas-fir Veneer Dried by Air Impingement, J. R. Shelly and D. G. Arganbright, 6:52 (No. 5937).

Technical and Economic Characteristics of Two Solar Kiln Designs, T. G. Lumley and E. T. Choong, 7:49 (No. 5935).

Xerographic Copies of Stress Sections Can Improve Drying Records, J. D. Fell and J. H. Hill, 5:41 (TN-383).

Finishing & Overlaying

Gluing

Aspen Particleboards Bonded With Spent Sulfite Liquor Powder Treated With Sulfuric Acid, K. C. Shen and D. P. C. Fung, 3:34 (No. 5889).

Comparison of Curing and Bonding Properties of Particleboard- and Waferboard-Type Phenolic Resins, S-z. Chow and P. R. Steiner, 11:47 (No. 5980).

Effects of Extractives From Pressure-Refined Hardwood Fiber on the Gel Time of Urea-Formaldehyde Resin, R. O. Albritton and P. H. Short, 2:40 (TN-374).

Fillers and Extenders in Plywood Production — U.S. and Foreign Practices, J. E. Robertson and R. R. P. Robertson, 6:15 (No. 5921).

Structural Repair of Heavy Timber With Epoxy, R. R. Avent, P. H. Sanders, and L. Z. Emkin, 3:15 (No. 5905).

Mechanical Fastening

Mechanical Fastening of Wood: Two Studies at VPI&SU, E. G. Stern, 9:18 (TN-301).

Milling & Machining

Improved Pitch Rails for Peeling Douglas-fir and White Spruce, W. V. Hancock and J. R. T. Hailey, 2:30 (No. 5875).

Pollution Abatement & Control

Formaldehyde Emission From Particleboard — a New Method for Determination, A. Berge and B. Mellegaard, 1:21 (No. 5862).

In-Plant Pollution Control in the Hardboard Industry, 10:70 (No. 5976).

Reduction of Air Cylinder Exhaust Noise by Plenum Chamber Mufflers, W. A. Dost and M. R. Gorvad, 9:31 (No. 5953).

Timber Production

Changing Resource Quality: Impact on the Forest Products and Construction Industries, T. D. Fahey and E. Starostovic, 4:39 (No. 5892).

Procedure for Estimating Bunching and Swinging Distances in Roading Operations, R. H. Perkins and K. D. Lynn, 3:19 (No. 5910).

Tree-to-Mill Forest Harvesting Simulation Models: Where Are We? 10:50 (No. 6015).

MANAGEMENT

Economics & Financial Management

Business and Economic Information Available for Market Planning, 10:61 (No. 6044).

Community Development Planning for Forest Products Industry, D. A. Stumbo, 7:16 (No. 5754).

Economic Feasibility of Red Oak Press-Lam for Upholstered Furniture Framestock, W. L. Hoover, C. A. Eckelman, R. W. Jokerst, and J. A. Youngquist, 11:21 (No. 5986).

Growing Dependency of Wood Products on Adhesives and Other Chemicals,

J. T. White, 11:14 (No. 6090).
Possible Changes in Regional Forest Product Output and Consumption During the Next 50 Years, 10:75 (No. 6036).

Marketing

Concrete Crossties — a Challenge to the Wood Tie Industry, J. P. Howe, 2:15 (No. 5871).
Marketing Training Is Essential in Planning Forest Industries, M. J. Adams, 3:12 (No. 5882).
Production and Marketing Feasibility of Parallel-Laminated Veneer Products, J. A. Youngquist and B. S. Bryant, 8:45 (No. 5970).
World Softwood Lumber Trade: Patterns, Trends, and Prospects, G. R Lindell, 7:43 (No. 5904).
Yellow-poplar Framing Lumber: Producer, Distributor, User, and Specifier Opinions, B. A. Schick and A. Grinell 1:16 (No. 5859).

Production Management

Changing Resource Quality: Impact on the Forest Products and Construction Industries, T. D. Fahey and E. Starostovic, 4:39 (No. 5892).
Econometric Model of the Domestic Insulation Board Industry, A. T. Schuler, 8:21 (No. 5936).
Effects of Oversimplification Inherent in LP Models of Primary Wood Processing Operations, G. R. Sampson, 5:23 (No. 5948).
New Tool for Solving Materials Flow Problems; a Computer-Based Model for Maximizing Output at Minimum Cost, 10:84 (No. 6045).

Quality Control

Determining Lumber Target Sizes and Monitoring Sawing Accuracy, T. D. Brown, 4:48 (No. 5777).
Development of Performance Specifications for Structural Panels in Residential Markets, M. R. O'Halloran, 12:21 (No. 5955).
Human Response to Vibration of Floors in Occupied Dwellings, G. H. Atherton and S. E. Corder, 7:29 (No. 5934).

Research Management

Forest Products Research in the Forest Service, 10:56 (No. 6046).
Potential Problems Facing University Research in Forestry and Forest Products, D. P. Duncan, 4:14 (No. 6032).

FUNDAMENTAL DISCIPLINES DIVISION

Biology

CCA and Sodium Pentachlorophenate Inhibition of Basidiospore Germination of Decay Fungi: Contact Agar Method, E. L. Schmidt and D. W. French, 5:53 (No. 5966).
Decay Resistance of Angelique (*Dicorynia guianensis*), T. C. Scheffer, 6:33 (TN-385).
Natural Resistance of Some Tropical African Woods to *Coptotermes formosanus* Shiraki, J. D. Bultman, R. H. Beal, and F. F. K. Ampong, 6:46 (No. 5860).
Resistance of Wood From Paraquat-Treated Southern Pines to Subterranean Termites, Decay Fungi, and Marine Borers, R. H. Beal, T. L. Amburgey, J. D. Bultman, and D. R. Roberts, 4:35 (No. 5888).
Termite Bioassays Show Greatly Varied Tolerances to Insecticide in Bait Blocks, G. R. Esenther, 9:55 (No. 5987).
Two-Day Mold Testing Using a Contact Agar Method, E. L. Schmidt and D. W. French, 9:39 (No. 5952).

Chemistry

Activities of the Chemistry and Pulp and Paper Technical Committees of FPRS, 10:67 (No. 6055).

Physics

Height, Diameter, and Specific Gravity of "Foxtail" Trees of *Pinus caribaea* Mor., F. W. Woods, L. W. Vincent, W. W. Moschler, and H. A. Core, 5:43 (TN-381).
Volume, Weight, and Pulping Properties of 5-Year-Old Hardwoods, R. M. Krinard, H. E. Kennedy, Jr., and R. L. Johnson, 8:52 (No. 5951).

Wood Engineering & Mechanical Properties

Bending Tolerance of Veneer Is Related to Its Toughness, T. C. Scheffer, 2:53 (TN-375).
Deflection in Bending of Birch Veneered Wood-Base Composite Shelving Panels, P. Chow, 12:39 (TN-392).
Effect of High-Temperature Drying on Tensile Strength of Douglas-fir 2 by 4's, C. C. Gerhards, 3:39 (No. 5900).
Effect of High-Temperature Drying on the Strength of Southern Pine Dimension Lumber, J. Yao and F. Taylor, 8:49 (No. 5878).
Effect of Moisture on Flexural Properties of Clear Southern Pine Plywood, W-C. Lee and E. J. Biblis, 11:43 (No. 5989).
Evaluation of Glued Laminated Beams of Eastern Spruce and Eastern Hemlock, C. E. Shuler, D. A. Grant, and R. C. Moody, 7:23 (No. 5947).
Fracture Toughness of Parallel-Laminated Veneer, Y-k. Lei and J. B. Wilson, 8:28 (TN-378).
History of L/360, D. H. Percival, 8:26 (TN-379).
Humidity Cycling Effects on Pine Veneer-Particleboard Core Structure Panels, E. J. Biblis and W-C. Lee, 1:52 (No. 5884).
Measured and Actual Strength Ratio of Utility Grade Studs, A. Polensek and J. R. Loferski, 9:50 (TN-389).
Modeling Joints Made With Light-Gage Metal Connector Plates, L. A. Beineke and S. K. Suddarth, 8:39 (No. 6106).
Modeling the Stress-Compression Relationships in Wood in Compression Perpendicular to Grain, B. A. Bendtsen and W. L. Galligan, 2:42 (No. 5907).
Modulus of Rupture and Dynamic and Static Modulus of Elasticity of Eastern Cottonwood Two-by-Fours, J. W. Funck, D. R. Prestemon, and D. W. Bensend, 11:35 (TN-377).
Out-of-Plane Strength and Stiffness of Dowel Joints, C. A. Eckelman, 8:32 (No. 5959).
Plen-Wood — an Improved Wood Floor System, D. Countryman, 6:29 (No. 5930).
Predicting Rolling Shear Modulus of Plywood, W-C. Lee and E. J. Biblis, 4:31 (No. 5908).
Press-Time Reduction by Preheating and Strength Improvement by Finger-Jointing Laminated Veneer Lumber, R. C. Casilla and S-z. Chow, 11:30 (No. 6004).
Reel Wheels: an Application of Material Science, R. L. Geimer, 4:44 (No. 5891).
Strength Loss in Small Clear Specimens of Beetle-Killed Southern Pine, S. A. Sinclair, T. E. McLain, and G. Ifju, 6:35 (No. 5978).
Withdrawal Strength of Dowel Joints: Effect of Shear Strength, C. A. Eckelman, 1:48 (No. 5863).

PAPERS OF SPECIAL INTEREST

Developments in Applied Drying Technology, 1971-1977, D. G. Arganbright, 12:14 (No. 5595).
Fillers and Extenders in Plywood Production — U.S. and Foreign Practices, J. E. Robertson and R. R. P. Robertson, 6:15 (No. 5921).
Growing Dependency of Wood Products on Adhesives and Other Chemicals, J. T. White, 11:14 (No. 6090).
Lumber Manufacture, Ed Williston, 10:45 (No. 5931).
Tree-to-Mill Forest Harvesting Simulation Models: Where Are We? 10:50 (No. 6015).

Turn page to Author Index

FPRS Author Index . . . Vol. 29, 1979

A

Adams, D. M., *see* Haynes, R. W.
Adams, M. J., Marketing Training Is Essential in Planning Forest Industries, 3:12 (No. 5882).
Albritton, R. O., and P. H. Short, Effects of Extractives From Pressure-Refined Hardwood Fiber on the Gel Time of Urea-Formaldehyde Resin, 2:40 (TN-374).
Amburgey, T. L., and B. R. Johnson, Comparing Ammoniation and Water-Repellent Preservative Treatments for Protecting Wood Window Units From Decay, 3:23 (No. 5911).
Amburgey, T. L., *see* Beal, R. H.
Ampong, F. F. K., *see* Bultman, J. D.
Arganbright, D. G., Developments in Drying, 1971-74, 12:14 (No. 5595).
Arganbright, D. G., *see* Shelly, J. R.
Atherton, G. H., and S. E. Corder, Human Response to Vibration of Floors in Occupied Dwellings, 7:29 (No. 5934).
Avent, R. R., P. H. Sanders, and L. Z. Emkin, Structural Repair of Heavy Timber With Epoxy, 3:15 (No. 5905).

B

Barnes, H. M., *see* Lyon, D. E.
Beal, R. H., Preventing Termite Attack by Adding Insecticide to Particleboard, Hardboard, and Plywood Adhesive, 12:29 (No. 5958).
Beal, R. H., T. L. Amburgey, J. D. Bultman, and D. R. Roberts, Resistance of Wood From Paraquat-Treated Southern Pines to Subterranean Termites, Decay Fungi, and Marine Borers, 4:35 (No. 5888).
Beal, R. H., *see* Bultman, J. D.
Beineke, L. A., and S. K. Suddarth, Modeling Joints Made With Light-Gage Metal Connector Plates, 8:39 (No. 6106).
Bendtsen, B. A., and W. L. Galligan, Modeling the Stress-Compression Relationships in Wood in Compression Perpendicular to Grain, 2:42 (No. 5907).
Bensend, D. W., *see* Funck, J. W.
Berge, A., and B. Mellegaard, Formaldehyde Emission From Particleboard — a New Method for Determination, 1:21 (No. 5862).
Biblis, E. J., and W-C. Lee, Humidity Cycling Effects on Pine Veneer-Particleboard Core Structure Panels, 1:52 (No. 5884).
Biblis, E. J., *see* Lee, W-C.
Biblis, E. J., *see* Lee, W-C.
Biltonen, F. E., *see* Chen, P.Y.S.
Bowyer, J. L., *see* Carino, H. F.
Brown, T. D., Determining Lumber Target Sizes and Monitoring Sawing Accuracy, 4:48 (No. 5777).
Bryant, B. S., *see* Youngquist, J. A.
Bultman, J. D., R. H. Beal, and F. F. K. Ampong, Natural Resistance of Some Tropical African Woods to *Coptotermes formosanus* Shiraki, 6:46 (No. 5860).
Bultman, J. D., *see* Beal, R. H.

C

Carino, H. F., and J. L. Bowyer, New Tool for Solving Materials Flow Problems: a Computer-Based Model for Maximizing Output at Minimum Cost, 10:84 (No. 6045).
Carroll, M. N., *see* Kasper, J. B.
Casilla, R. C., and S-z. Chow, Press-Time Reduction by Preheating and Strength Improvement by Finger-Jointing Laminated Veneer Lumber, 11:30 (No. 6004).
Chen, P. Y. S., and F. E. Biltonen. Effect of Prefreezing on Press-Drying of Black Walnut Heartwood, 2:48 (No. 5894).
Choong, E. T., *see* Lumley, T. G.
Chow, P., Deflection in Bending of Birch-Veneered Wood-Base Composite Shelving Panels, 12:39 (TN-392).
Chow, S-z., and P. R. Steiner, Comparison of Curing and Bonding Properties of Particleboard- and Waferboard-Type Phenolic Resins, 11:49 (No. 5980).
Chow, S-z., *see* Casilla, R. C.
Christophersen, K. A., and J. P. Howe, High-Value Paneling From Dead Western White Pine, 6:40 (No. 5933).
Clark, A. III, *see* Phillips, D. R.
Corder, S. E., *see* Atherton, G. H.
Core, H. A., *see* Woods, F. W.
Countryman, D., Plen-Wood — an Improved Wood Floor System, 6:29 (No. 5930).

D

Dallons, V., In-Plant Pollution Control in the Hardboard Industry, 10:70 (No. 5976).
Della Lucia, R. M., *see* Senft, J. F.
Dickerhoof, E., *see* Kallio, E.
Dost, W. A., and M. R. Gorvad, Reduction of Air Cylinder Exhaust Noise by Plenum Chamber Mufflers, 9:31 (No. 5953).
Duncan, D. P., Potential Problems Facing University Research in Forestry and Forest Products, 4:14 (No. 6032).

E

Eckelman, C. A., Withdrawal Strength of Dowel Joints: Effect of Shear Strength, 1:48 (No. 5863).
Eckelman, C. A., W. L. Hoover, R. W. Jokerst, and J. A. Youngquist, Utilization of Red Oak Press-Lam as Upholstered Furniture Frame Stock, 5:30 (No. 5929).
Eckelman, C. A., Out-of-Plane Strength and Stiffness of Dowel Joints, 8:32 (No. 5959).
Eckelman, C. A., *see* Hoover, W. L.
Emkin, L. Z., *see* Avent, R. R.
Esenther, G. R., Termite Bioassays Show Greatly Varied Tolerances to Insecticide in Bait Blocks, 9:55 (No. 5987).

F

Fahey, T. D., and E. Starostovic, Changing Resource Quality: Impact on the Forest Products and Construction Industries, 4:39 (No. 5892).
Fell, J. D., and J. L. Hill, Xerographic Copies of Stress Sections Can Improve Drying Records, 5:41 (TN-383).
Fergus, D. A., *see* Hunt, M. O.
Forss, K., and A. Fuhrman, Finnish Plywood, Particleboard, and Fiberboard Made With a Lignin-Base Adhesive, 7:39 (No. 5840).
French, D. W., *see* Schmidt, E. L.
French, D. W., *see* Schmidt, E. L.
Fuhrmann, A., *see* Forss, K.
Funck, J. W., D. R. Prestemon, and D. W. Bensend, Modulus of Rupture and Dynamic and Static Modulus of Elasticity of Eastern Cottonwood Two-by-Fours, 11:35 (TN-377).
Fung, D. P. C., *see* Shen, K. C.

G

Galligan, W. L., *see* Bendtsen, B. A.
Geimer, R. L., Reel Wheels: an Application of Material Science, 4:44 (No. 5891).
Gerhards, C. C., Effect of High-Temperature Drying on Tensile Strength of Douglas-fir 2 by 4's, 3:39 (No. 5900).
Gertjejansen, R. O., *see* Hall, H. J.
Gertjejansen, R. O., *see* Niazi, K. A.
Gorvad, M. R., *see* Dost, W. A.
Goulet, D. V., R. H. Iff, and D. L. Sirois, Tree-to-Mill Forest Harvesting Simulation Models: Where Are We? 10:50 (No. 6015).
Graham, R. D., In Large Timbers Fumigants Stop Rot That Good Design Could Have Prevented, 9:21 (No. 5963).
Grant, D. A., *see* Shuler, C. E.
Gregersen, H., *see* Haygreen, J.
Grinell, A., *see* Schick, B. A.

H

Hailey, J. R. T., *see* Hancock, W. V.
Hall, H. J., and R. O. Gertjejansen, Weatherability of Phenolic-Bonded Ghanaian Hardwood Flakeboard

Made From ACA-Treated Flakes, 12:34 (No. 6008).
Hancock, W. V., and J. R. T. Hailey, Improved Pitch Rails for Peeling Douglas-fir and White Spruce, 2:30 (No. 5875).
Harpole, G. B., Economic Models for Structural Flakeboard Production, 12:26 (No. 5985).
Haygreen, J., and H. Gregersen, Integrated Utilization of Mixed Tropical Hardwoods: Example From the Philippines, 9:15 (No. 5914).
Haynes, R. W., and D. M. Adams, Possible Changes in Regional Forest Product Output and Consumption During the Next 50 Years. 10:75 (No. 6036).
Hill, J. L., *see* Fell, J. D.
Hoover, W. L., C. A. Eckelman, R. W. Jokerst, and J. A. Youngquist, Economic Feasibility of Red Oak Press-Lam for Upholstered Furniture Framestock, 11:21 (No. 5986).
Hoover, W. L., *see* Eckelman, C. A.
Hoover, W. L., *see* Hunt, M. O.
Howe, J. P., Concrete Crossties — a Challenge to the Wood Tie Industry, 2:15 (No. 5871).
Howe, J. P., *see* Christophersen, K. A.
Hulme, M. A., and J. F. Thomas, Control of Fungal Sap Stain With Alkaline Solutions of Quaternary Ammonium Compounds and With Tertiary Amine Salts, 11:26 (No. 5982).
Hunt, M. O., W. L. Hoover, D. A. Fergus, W. F. Lehmann, and J. D. McNatt, Red Oak Structural Particleboard, 9:43 (No. 5971).

I

Iff, R. H., *see* Goulet, D. V.
Ifju, G., *see* McLain, T. E.
Ifju, G., *see* Sinclair, S. A.
Ince, P. J., Cost of Grading Lumber by the Machine-Stress-Rating Process, 10:80 (No. 6047).

J

Johnson, B. R., *see* Amburgey, T. L.
Johnson, J. W., Lateral Tests of Wood Roof Sections Sheathed With Lodgepole Pine Decking, 1:41 (TN-368).
Johnson, J. W., Tests of Fire-Retardant Treated and Untreated Lumber-Plywood Nailed and Stapled Joints. 4:23 (No. 5909).
Johnson, R. L., *see* Krinard, R. M.
Jokerst, R. W., *see* Eckelman, C. A.
Jokerst, R. W., *see* Hoover, W. L.

K

Kallio, E., and E. Dickerhoof, Business and Economic Information Available for Market Planning, 10:61 (No. 6044).
Kasper, J. B., and M. N. Carroll, Linear Expansion of Particleboard Decking Under Site-Built Exposure Conditions, 5:49 (No. 5881).
Kennedy, H. E., Jr., *see* Krinard, R. M.
Koenigshof, G. A., Status of COM-PLY Floor Joist Research, 11:37 (No. 5975).
Krinard, R. M., H. E. Kennedy, Jr., and R. L. Johnson, Volume, Weight, and Pulping Properties of 5-Year-Old Hardwoods, 8:52 (No. 5951).

L

Lee, W. C., and E. J. Biblis, Predicting Rolling Shear Modulus of Plywood, 4:31 (No. 5908).
Lee, W-C., and E. J. Biblis, Effect of Moisture on Flexural Properties of Clear Southern Pine Plywood, 11:43 (No. 5984).
Lee, W-C., *see* Biblis, E. J.
Lehmann, W. F., *see* Hunt, M. O.
Lehmann, W. F., *see* Price, E. W.
Lei, Y-k., and J. B. Wilson, Fracture Toughness of Parallel-Laminated Veneer, 8:28 (TN-378).
Lindell, G. R., World Softwood Lumber Trade: Patterns, Trends, and Prospects, 7:43 (No. 5904).
Little, R. L., Ongoing Research — Solar Heated Water Dries Lumber, 2:52 (TN-386).
Loferski, J. R., *see* Polensek, A.
Lumley, T. G., and E. T. Choong, Technical and Economic Characteristics of Two Solar Kiln Designs, 7:49 (No. 5935).
Lynn, K. D., *see* Perkins, R. H.
Lyon, D. E., and H. M. Barnes, Racking Resistance of Wall Components Constructed With Particleboard Decking, 1:43 (No. 5854).

M

McGinnes, E. A., Activities of the Chemistry and Pulp and Paper Technical Committees of FPRS, 10:67 (No. 6055).
McLain, T. E., *see* Sinclair, S. A.
McMillin, J. M., *see* Sumi, H.
McNatt, J. D., *see* Hunt, M. O.
Mellegaard, B., *see* Berge, A.
Miller, D. J., Deterioration of Logs in Cold Decks: a Survey of Information Applying to the Pacific Northwest, 1:34 (No. 5864).
Moody, R. C., *see* Shuler, C. E.
Moschler, W. W., *see* Woods, F. W.
Myers, G. C., Hardboards From Mixed Tropical Hardwoods, 5:44 (No. 5924).

N

Newman, J. A., *see* Richards, D. B.
Niazi, K. A., and R. O. Gertjejansen, Linear Dimensional Stability of Aspen Veneered Particleboard, 5:28 (TN-387).

O

O'Halloran, M. R., Development of Performance Specifications for Structural Panels in Residential Markets, 12:21 (No. 5955).

P

Perkins, R. H., and K. D. Lynn, Procedure for Estimating Bunching and Swinging Distances in Roading Operations, 3:19 (No. 5910).
Percival, D. H., History of L/360, 8:26 (TN-379).
Phillips, D. R., J. G. Schroeder, and A. Clark III, Predicting Veneer Grade Yields for Loblolly and Slash Pine Trees, 12:41 (No. 5992).
Polensek, A., and J. R. Loferski, Measured and Actual Strength Ratio of Utility Grade Studs, 9:50 (TN-389).
Prestemon, D. R., *see* Funck, J. W.
Price, E. W., and W. F. Lehmann, Flakeboard Properties as Affected by Flake Cutting Techniques, 3:29 (No. 5897).

R

Richards, D. B., and J. A. Newman, Sawing High-Quality Red Oak Logs, 9:36 (No. 5962).
Roberts, D. R., *see* Beal, R. H.
Robertson, J. E., and R. R. P. Robertson, Fillers and Extenders in Plywood Production — U.S. and Foreign Practices, 6:15 (No. 5921).
Robertson, R. R. P., *see* Robertson, J. E.
Ross, N. A., *see* Ruddick, J. N. R.
Ruddick, J. N. R., and N. A. Ross, Effect of Kerfing on Checking of Untreated Douglas-fir Pole Sections, 9:27 (No. 5979).

S

Sampson, G. R., Effects of Oversimplification Inherent in LP Models of Primary Wood Processing Operations, 5:23 (No. 5948).
Sanders, P. H., *see* Avent, R. R.
Saunders, H. W., Hardwood Sawing Process for Increasing Recovery and Improving Production, 2:21 (No. 5872).
Scheffer, T. C., Bending Tolerance of Veneer Is Related to Its Toughness, 2:53 (TN-375).
Scheffer, T. C., Decay Resistance of Angelique (*Dicorynia guianensis*), 6:33 (TN-385).
Schick, B. A., and A. Grinell, Yellow-poplar Framing Lumber: Producer, Distributor, User, and Specifier Opinions, 1:16 (No. 5859).
Schmidt, E. L., and D. W. French, CCA and Sodium Pentachlorophenate Inhibition of Basidiospore Germination of Decay Fungi: Contact Agar Method, 5:53 (No. 5966).
Schmidt, E. L., and D. W. French, Two-Day Mold Testing Using a Contact Agar Method, 9:39 (No. 5952).
Schroeder, J. G., *see* Phillips, D. R.
Schuler, A. T., Econometric Model of the Domestic Insulation Board Industry, 8:21 (No. 5936).
Senft, J. F., and R. M. Della Lucia, Increased Utilization of Tropical Hardwoods Through Species-

Independent Structural Grading, 6:22 (No. 5669).
Shelly, J. R., and D. G. Arganbright, Shrinkage of Douglas-fir Veneer Dried by Air Impingement, 6:52 (No. 5937).
Shen, K. C., and D. P. C. Fung, Aspen Particleboards Bonded With Spent Sulfite Liquor Powder Treated With Sulfuric Acid, 3:34 (No. 5889).
Short, P. H., *see* Albritton, R. O.
Shuler, C. E., D. A. Grant, and R. C. Moody, Evaluation of Glued Laminated Beams of Eastern Spruce and Eastern Hemlock, 7:23 (No. 5947).
Sinclair, S. A., and G. Ifju, Lumber Quality of Beetle-Killed Southern Pine in Virginia, 4:18 (No. 5922).
Sinclair, S. A., T. E. McLain, and G. Ifju, Strength Loss in Small Clear Specimens of Beetle-Killed Southern Pine, 6:35 (No. 5978).
Sirois, D. L., *see* Goulet, D. V.
Starostovic, E., *see* Fahey, T. D.
Steiner, P. R., *see* Chow, S-z.
Stern, E. G., Mechanical Fastening of Wood: Two Studies at VPI&SU, 9:52 (TN-391).
Stern, E. G., Predrilling of Pallet Deckboards of Very Dense Hardwoods, 12:48 (TN-390).
Stumbo, D. A., Choosing Forest Products Industries for Community Development Planning, 7:16 (No. 5754).
Suddarth, S. K., *see* Beineke, L. A.
Sumi, H., and J. M. McMillen, High-Temperature Drying of Douglas-fir Dimension Lumber, 1:25 (No. 5876).

T

Taylor, F., *see* Yao, J.
Thomas, J. F., *see* Hulme, M. A.

U

Unligil, H. H., Laboratory Screening Tests of Fungicides of Low Toxic Hazard for Preventing Fungal Stain of Lumber, 4:55 (TN-384).

V

Vincent, L. W., *see* Woods, F. W.

W

White, J. T., Growing Dependency of Wood Products on Adhesives and Other Chemicals, 11:14 (No. 6090).
Williston, E., State-of-the-Art — Lumber Manufacture, 10:45 (No. 5931).
Wilson, J. B., *see* Lei, Y-k.
Wilson, J. B., *see* Wisherd, K. D.
Wisherd, K. D., and J. B. Wilson, Bark as a Supplement to Wood Furnish for Particleboard, 2:35 (No. 5824).
Woods, F. W., L. W. Vincent, W. W. Moschler, and H. A. Core, Height, Diameter, and Specific Gravity of "Foxtail" Trees of *Pinus caribaea* Mor., 5:43 (TN-381).

Y

Yao, J., and F. Taylor, Effect of High-Temperature Drying on the Strength of Southern Pine Dimension Lumber, 8:49 (No. 5878).
Youngquist, J. A., and B. S. Bryant, Production and Marketing Feasibility of Parallel-Laminated Veneer Products, 8:45 (No. 5970).
Youngquist, J. A., *see* Eckelman, C. A.
Youngquist, J. A., *see* Hoover, W. L.
Youngs, R. L., Forest Products Research in the Forest Service, 10:56 (No. 6046).

FPJ BOOK REVIEWS

Studies in Management and Accounting for the Forest Products Industries

School of Business
Oregon State Univ.
Corvallis, OR 97331

Each study is between 8 and 19 pages long, attractively prepared and very well illustrated with tables and graphs. Each is based on research and has been written by one or more experts in the field. They are well edited so the important message is very understandable. The practical experience of the authors is much in evidence and will be appreciated by both students and those versed in the subject area.

Titles include: "The rush to LIFO: Is it always good for wood products companies?"; "Accounting and financial management in the forest products industries: a guide to the published literature"; "A decision framework for trading lumber futures"; "Capital gains tax treatment in the forest products industries; a partial analysis of Section 631(a) of the Internal Revenue Code"; "Measurement difficulties in the log conversion process"; "Capital budgeting practices in the forest products industries"; "A reporting and control system for wood products futures trading activities"; and "Selected issues of financial accounting and reporting for timber." They can be ordered singly for $4.00 each or the entire set for $25.00 from the School of Business.

— **Stewart Holmes, Editor**

Wood as an Energy Resource

David A. Tillman

Academic Press, New York, N.Y.
1978 xiv
252 pp. illus. $13.50

Wood, once a major source of energy for heating homes and food plus providing industrial process heat, was replaced by coal and petroleum because of their high concentrated heat contents, ease of handling and lower costs. Now that fossil fuel supplies are decreasing and simultaneously increasing in price, wood is again being examined as an

Continued on page 59

Hardwood Utilization Conference Scheduled At Purdue University

"Opportunities and Constraints in Utilization of the Hardwood Resource" is the theme of Purdue University's sixth annual John S. Wright Forestry Conference. The conference will be held on the Purdue campus in Lafayette, Indiana, February 28-29, 1980.

The objective of this conference is to outline the future role of hardwoods in supplying the demand for both traditional and nontraditional markets.

The associate chief, USDA Forest Service, Douglas R. Leisz, will present the keynote address. Following are among other speakers on the program: James Yoho, International Paper Co.; Thomas Hart, Champion International Corp.; William Ticknor, Mead Corp.; Peter Vajda, Columbia Engineering International Ltd.; William F. Milliken, Milliken Forestry Services; Joseph Carrier, Stanford Research Institute; Hank Webster, Michigan Department of Natural Resources; and Steve Yurich, USDA Forest Service.

The conference is specifically designed for upper and middle management personnel, policymakers, development planners and engineers, land managers, and consultants in the forest products industry.

Additional information is available from Daniel Cassens, Dept. of Forestry and Nat. Res., Purdue Univ., W. Lafayette, IN 47907; phone 317-494-8616.